

**Declaration  
Utility Application**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **HIGH TEMPERATURE HEAP BIOLEACHING PROCESS**, the specification of which

(Check One)

is attached hereto OR  
was filed on **August 29, 2000** as United States Application

Serial No. **09/650,319** or PCT International Application No.  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Date of Filing	Priority Claimed	
			Yes	No

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date	Status-Patented, Pending or Abandoned
09/212,579		December 14, 1998	Patented 6,110,253

Express Mail No.  
EL 740478036 US

Send Correspondence to: David A. Randall	LYON & LYON LLP 633 W Fifth St., Suite 4700 Los Angeles, CA 90071	Direct Telephone calls to: (213) 489-1600 Ext. 3453
---	---	---

	FULL NAME OF INVENTOR	FIRST Name William	MIDDLE Initial J.	LAST Name KOHR
201	RESIDENCE & CITIZENSHIP	City San Mateo	State or Foreign Country California	Country of Citizenship United States of America
	POST OFFICE ADDRESS	40 Powhatan Place	City San Mateo	State or Country USA Zip Code 94402

	FULL NAME OF INVENTOR	FIRST Name Vandy	MIDDLE Initial	LAST Name SHRADER
202	RESIDENCE & CITIZENSHIP	City Belmont	State or Foreign Country California	Country of Citizenship United States of America
	POST OFFICE ADDRESS	1934 Hillman Avenue	City Belmont	State or Country USA Zip Code 94002

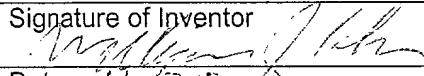
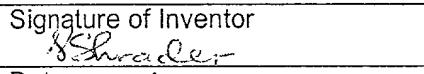
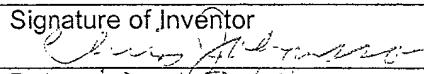
	FULL NAME OF INVENTOR	FIRST Name Chris	MIDDLE Initial	LAST Name Johansson
203	RESIDENCE & CITIZENSHIP	City San Bruno	State or Foreign Country California	Country of Citizenship United States of America
	POST OFFICE ADDRESS	2846 Fleetwood Drive	City San Bruno	State or Country 94066 Zip Code

	FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial	LAST Name
204	RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	POST OFFICE ADDRESS		City	State or Country Zip Code

	FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial	LAST Name
205	RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	POST OFFICE ADDRESS		City	State or Country Zip Code

	FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial	LAST Name
206	RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship
	POST OFFICE ADDRESS		City	State or Country Zip Code

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 	201
Date 12/12/2003	
Signature of Inventor 	202
Date 12/15/2003	
Signature of Inventor 	203
Date 12/15/2003	

Signature of Inventor	204
Date	
Signature of Inventor	205
Date	
Signature of Inventor	206
Date	

(Signatures should conform to names as presented at 201 et seq. above.)

**POWER OF ATTORNEY**

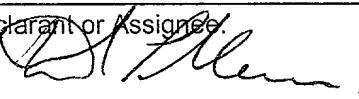
GEOBIOTICS, INC., assignee(s) of the application for United States Letters Patent for an improvement in HIGH TEMPERATURE HEAP BIOLEACHING PROCESS by William J. KOHR, Vandy SHRADER and Chris JOHANSSON, the specification of which was

executed on \_\_\_\_\_ and bearing attorney Docket No. \_\_\_\_\_, or  
 filed having Serial No. 09/650,319 on August 29, 2000.

hereby appoint as its attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Roland N. Smoot, Reg. No. 18,718; Conrad R. Solum, Jr., Reg. No. 20,467; James W. Geriak, Reg. No. 20,233; Robert M. Taylor, Jr., Reg. No. 19,848; Samuel B. Stone, Reg. No. 19,297; Douglas E. Olson, Reg. No. 22,798; Robert E. Lyon, Reg. No. 24,171; Robert C. Weiss, Reg. No. 24,939; Richard E. Lyon, Jr., Reg. No. 26,300; John D. McConaghy, Reg. No. 26,773; William C. Steffin, Reg. No. 26,811; Coe A. Bloomberg, Reg. No. 26,605; J. Donald McCarthy, Reg. No. 25,119; John M. Benassi, Reg. No. 27,483; James H. Shalek, Reg. No. 29,749; Allan W. Jansen, Reg. No. 29,395; Robert W. Dickerson, Reg. No. 29,914; Roy L. Anderson, Reg. No. 30,240; David B. Murphy, Reg. No. 31,125; James C. Brooks, Reg. No. 29,898; Jeffrey M. Olson, Reg. No. 30,790; Steven D. Hemminger, Reg. No. 30,755; Jerrold B. Reilly, Reg. No. 32,293; Paul H. Meier, Reg. No. 32,274; John A. Rafter, Jr., Reg. No. 31,653; Kenneth H. Ohriner, Reg. No. 31,646; Mary S. Consalvi, Reg. No. 32,212; Lois M. Kwasigroch, Reg. No. 35,579; Lawrence R. LaPorte, Reg. No. 38,948; Robert C. Laurenson, Reg. No. 34,206; Carol A. Schneider, Reg. No. 34,923; Hope E. Melville, Reg. No. 34,874; Michael J. Wise, Reg. No. 34,047; Richard J. Warburg, Reg. No. 32,327; Kurt T. Mulville, Reg. No. 37,194; Theodore S. Maceiko, Reg. No. 35,593; Bruce G. Chapman, Reg. No. 33,846; and F.T. Alexandra Mahaney, Reg. No. 37,668; and David A. Randall, Reg. No. 37,217.

Send Correspondence to: David A. Randall	LYON & LYON LLP 633 W Fifth St., Suite 4700 Los Angeles, CA 90071-2066	Direct Telephone calls to: (213) 489-1600 Ext. 3453
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I, the undersigned, declare that I am the (an) assignee of the above-identified application or, if the assignee is a corporation, partnership or other association, I am authorized to make this appointment on behalf of the assignee and I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 19 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full Name of Assignee: GEOBIOTICS, INC.	
Post Office Address: 14818 W. 6 <sup>th</sup> Avenue, Suite 5-A, Golden, Colorado 80401	
Signature of Declarant or Assignee: 	Date: December 12, 2000

Full Name of Declarant (If Other Than Assignee): Desmond P. Kearns
Title of Declarant: President and Chief Executive Officer
Address of Declarant: GEOBIOTICS, INC., 14818 W. 6 <sup>th</sup> Avenue, Suite 5-A, Golden, Colorado 80401

Express Mail No.  
EL 740478036 US



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SEPTEMBER 27, 2001

PTAS



\*101789772A\*

LYON & LYON LLP  
DAVID A. RANDALL  
633 WEST FIFTH STREET  
SUITE 4700  
LOS ANGELES, CA 90071-2066

JC979 U.S. PTO  
10/086647  
02/28/02

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 07/23/2001

REEL/FRAME: 012002/0001  
NUMBER OF PAGES: 5

BRIEF: MERGER (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
GEOBIOTICS, INC.

DOC DATE: 12/28/2000

ASSIGNEE:  
GEOBIOTICS, LLC  
14818 WEST 6TH AVENUE  
SUITE 5-A  
GOLDEN, COLORADO 80401

SERIAL NUMBER: 08329002  
PATENT NUMBER:

FILING DATE: 10/25/1994  
ISSUE DATE:

SERIAL NUMBER: 08459621  
PATENT NUMBER:

FILING DATE: 06/02/1995  
ISSUE DATE:

SERIAL NUMBER: 09650319  
PATENT NUMBER:

FILING DATE: 08/29/2000  
ISSUE DATE:

SERIAL NUMBER: 09709765  
PATENT NUMBER:

FILING DATE: 11/10/2000  
ISSUE DATE:

SEARCHED INDEXED  
SERIALIZED FILED

012002/0001 PAGE 2

SERIAL NUMBER: 09735156 PATENT NUMBER:	FILING DATE: 12/12/2000 ISSUE DATE:
SERIAL NUMBER: 08161742 PATENT NUMBER: 5431717	FILING DATE: 12/03/1993 ISSUE DATE: 07/11/1995
SERIAL NUMBER: 08343888 PATENT NUMBER: 5573575	FILING DATE: 11/16/1994 ISSUE DATE: 11/12/1996
SERIAL NUMBER: 08453016 PATENT NUMBER: 5611839	FILING DATE: 05/30/1995 ISSUE DATE: 03/18/1997
SERIAL NUMBER: 08476444 PATENT NUMBER: 5676733	FILING DATE: 06/07/1995 ISSUE DATE: 10/14/1997
SERIAL NUMBER: 08652993 PATENT NUMBER: 5688304	FILING DATE: 05/24/1996 ISSUE DATE: 11/18/1997
SERIAL NUMBER: 08636117 PATENT NUMBER: 5766930	FILING DATE: 04/22/1996 ISSUE DATE: 06/16/1998
SERIAL NUMBER: 08547894 PATENT NUMBER: 5779762	FILING DATE: 10/25/1995 ISSUE DATE: 07/14/1998
SERIAL NUMBER: 08819753 PATENT NUMBER: 5800593	FILING DATE: 03/18/1997 ISSUE DATE: 09/01/1998
SERIAL NUMBER: 08588589 PATENT NUMBER: 6083730	FILING DATE: 01/18/1996 ISSUE DATE: 07/04/2000
SERIAL NUMBER: 09060273 PATENT NUMBER: 6086656	FILING DATE: 04/14/1998 ISSUE DATE: 07/11/2000
SERIAL NUMBER: 08886840 PATENT NUMBER: 6107065	FILING DATE: 07/01/1997 ISSUE DATE: 08/22/2000
SERIAL NUMBER: 09212579 PATENT NUMBER: 6110253	FILING DATE: 12/14/1998 ISSUE DATE: 08/29/2000
SERIAL NUMBER: 08950279 PATENT NUMBER: 6146444	FILING DATE: 10/14/1997 ISSUE DATE: 11/14/2000
SERIAL NUMBER: 09097316 PATENT NUMBER: 6159726	FILING DATE: 06/12/1998 ISSUE DATE: 12/12/2000

TONYA LEE, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

RECOF

07-27-2001

Docket No.

To the Honorable Commissioner of Patents and

101789772

final documents or copy thereof.

1. Name of conveying party(ies):

GeoBiotics, Inc.

Additional name(s) of conveying party(ies) attached?

Yes  No

3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_

Execution Date: December 28, 2000

2. Name and address of receiving party:

Name: GeoBiotics, LLC

Internal Address: JUL 23 2001

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Street Address: 14818 West 6th Avenue, Suite 5-A

City: Golden State: Co Zip: 80401

Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No(s).: 08/329,002 Filed: 10/25/94  
Attorney Docket No. 209/233

B. Patent No(s).: 5,431,717 Filed: 12/3/93 Attorney Docket  
No. 204/256

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David A. Randall

Internal Address: LYON & LYON LLP  
633 West Fifth Street, Suite 4700  
Los Angeles, CA 90071-2066

6. Total number of applications and patents involved: 19

7. Total fee (37 CFR 3.41): \$ 760.00  
 Enclosed

Charge this Deposit Account if any additional fee is required

8. Deposit Account Number: 12-2475

DO NOT USE THIS SPACE

9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: July 18, 2001

David A. Randall, Reg No. 37,217

Total number of pages including cover sheet: 5 (NOTE: Apostille on back of last page.)

OMB No. 0651-0011 (exp. 4/94)

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Director — U.S. Patent and Trademark Office

Box Assignments

Washington, D.C. 20231

07/26/2001 TDIAZ1 00000010 08329002

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Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of Information Systems, PK2-1000C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project, (0651-0011), Washington, D.C. 20503

**CONTINUATION OF FORM PTO-1595, SECTION 4**

**Patent Applications**

<u>Serial Number</u>	<u>Filing Date</u>	<u>Attorney Docket No.</u>
08/459,621	6/2/95	213/032
09/650,319	8/29/00	256/248
09/709,765	11/10/00	258/211
09/735,156	12/12/00	258/212

**Patents**

<u>Patent Number</u>	<u>Filing Date</u>	<u>Attorney Docket No.</u>
5,573,575	11/16/94	210/062
5,611,839	5/30/95	214/036
5,676,733	6/7/95	213/031
5,688,304	5/24/96	220/112
5,766,930	4/22/96	219/212
5,779,762	10/25/95	216/099
5,800,593	3/18/97	224/272
6,083,730	1/18/96	217/275
6,086,656	4/14/98	227/138
6,107,065	7/1/97	226/246
6,110,253	12/14/98	236/022
6,146,444	10/14/97	230/005
6,159,726	6/12/98	233/157

*State of Delaware*

PAGE 1

*Office of the Secretary of State*

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"GEOBIOTICS, INC.", A DELAWARE CORPORATION,  
WITH AND INTO "GEOBIOTICS, LLC" UNDER THE NAME OF  
"GEOBIOTICS, LLC", A LIMITED LIABILITY COMPANY ORGANIZED AND  
EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED  
AND FILED IN THIS OFFICE THE TWENTY-EIGHTH DAY OF DECEMBER, A.D.  
2000, AT 9 O'CLOCK A.M.

3316790 8100M



AUTHENTICATION: 0965555

010058514

DATE: 02-09-01

Express Mail No.  
EL 740478036 US

STATE OF DELAWARE  
SECRETARY OF STATE  
DIVISION OF CORPORATIONS  
FILED 09:00 AM 12/28/2000  
001657724 - 3316790

CERTIFICATE OF MERGER OF  
GEOBIOTICS, INC. WITH AND INTO  
GEOBIOTICS, LLC

Pursuant to Section 264(e) of the Delaware General Corporation Law (the "DGCL") and Section 18-209 of the Delaware Limited Liability Company Act, the undersigned limited liability company executed the following Certificate of Merger:

**FIRST:** The name of the surviving limited liability company is GeoBiotics, LLC, a Delaware limited liability company, and the name of the corporation being merged into this surviving limited liability company is GeoBiotics, Inc., a Delaware corporation.

**SECOND:** An Agreement and Plan of Merger has been approved, adopted, certified, executed and acknowledged by GeoBiotics, LLC and GeoBiotics, Inc. in accordance with Section 264 of the DGCL.

**THIRD:** The name of the surviving limited liability company is GeoBiotics, LLC.

**FOURTH:** The Agreement and Plan of Merger is on file at 14818 West 6<sup>th</sup> Avenue, Suite 5-A, Golden, Colorado 80401, the place of business of GeoBiotics, LLC.

**FIFTH:** A copy of the Agreement and Plan of Merger will be furnished by GeoBiotics, LLC, on request and without cost, to any stockholder of GeoBiotics, Inc. or any member of GeoBiotics, LLC.

Express Mail No.  
EL 740478036 US

IN WITNESS WHEREOF, GeoBiotics, LLC has caused this certificate to be signed by  
Desmond P. Kearns, a director of GeoBiotics, LLC, the 20 day of December, 2000.

GEOBIOTICS, LLC

By:   
Name: Desmond P. Kearns  
Title: Director

Express Mail No.  
EL 740478036 US



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MARCH 14, 2001

PTAS



\*101572792A\*

LYON & LYON LLP  
DAVID A. RANDALL, ESQ.  
633 WEST FIFTH STREET  
SUITE 4700  
LOS ANGELES, CA 90071-2066

256/248  
JC979 U.S. 41  
10/086642  
02/28/02

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/26/2000

REEL/FRAME: 011386/0964  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNEE'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
KOHR, WILLIAM J.

DOC DATE: 12/02/2000

ASSIGNOR:  
SHRADER, VANDY

DOC DATE: 12/05/2000

ASSIGNOR:  
JOHANSSON, CHRIS

DOC DATE: 12/02/2000

ASSIGNEE:  
GEOBIOTICS, INC.  
14818 W. 6TH AVENUE, SUITE 5-A  
GOLDEN, COLORADO 80401

SERIAL NUMBER: 09650319  
PATENT NUMBER:

FILING DATE: 08/29/2000  
ISSUE DATE:

RECEIVED  
MAR 22 2001  
U.S. PROSECUTION

Express Mail No.  
EL 740478036 US

011386/0964 PAGE 2

SEDLEY PYNE, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



01-05-2001

12.24.00  
U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Docket No. 256/248



101572792

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

William J. Kohr, Vandy Shrader and Chris Johansson  
 Additional name(s) of conveying party(ies) attached?  
 Yes  No

## 3. Nature of conveyance:

Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_

Execution Date: December 5, 2000

## 2. Name and address of receiving party:

Name: GEOBIOTICS, INC.

Internal Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Street Address: 14818 W. 6th Avenue, Suite 5-A

City: Golden State: CO Zip: 80401

Additional name(s) & address(es) attached?  Yes  No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No(s).: 09/650,319

B. Patent No(s).: \_\_\_\_\_

Additional numbers attached?  Yes  No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David A. Randall, Esq.

Internal Address: LYON &amp; LYON LLP

633 West Fifth Street, Suite 4700  
 Los Angeles, CA 90071-2066

6. Total number of applications and patents involved: One

7. Total fee (37 CFR 3.41): \$ 40.00

 Enclosed Charge this Deposit Account if any additional fee is required

8. Deposit Account Number: 12-2475

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## 9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Date: December 18, 2000

David A. Randall, Reg No. 37,217

Total number of pages including cover sheet: 5

OMB No. 0651-0011 (exp. 4/94)

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Washington, D.C. 20231

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Express Mail No.  
EL 740478036 US

A S S I G N M E N T

WHEREAS, WE, WILLIAM J. KOHR, VANDY SHRADER and CHRIS JOHANSSON, all citizens of UNITED STATES OF AMERICA (hereinafter referred to as "ASSIGNORS"), have invented and own a certain invention entitled **HIGH TEMPERATURE HEAP BIOLEACHING PROCESS** for which application for Letters Patent of the United States of America under Attorney Docket No. 256/248 was filed on August 29, 2000 and assigned Serial No. 09/650,319; and

WHEREAS, GEOBIOTICS, INC., a corporation organized and existing under and by virtue of the laws of the State of Delaware and having its principal place of business at 14818 W. 6<sup>th</sup> Avenue, Suite 5-A, Golden, Colorado 80401 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the exclusive right, title and interest in, to and under said invention and in, to and under any Patent or similar legal protection to be obtained therefor in the United States of America, its territorial possessions and in any and all countries foreign thereto.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign, transfer and set over unto the said ASSIGNEE, its successors and assigns, the full and exclusive right, title and interest to said invention and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for said invention by said application, and to any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; and ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent or any legal equivalent thereof to said ASSIGNEE, its successors and assigns, in accordance with this Assignment.

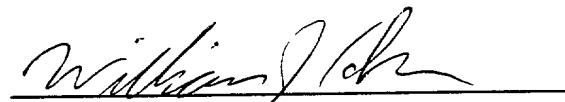
Express Mail No.  
EL 740478036 US

Patent  
256/248

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Agreement;

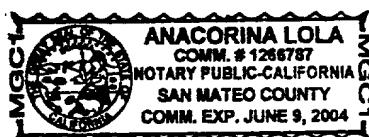
ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents in the United States or in any foreign country, which may be necessary or desirable to carry out the purposes thereof.

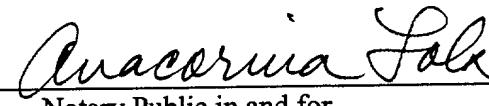
WITNESS my hand at So. San Francisco, California, this 2 day of December,  
2000.

  
WILLIAM J. KOHR

STATE OF CALIFORNIA )  
San Mateo ) ss.  
COUNTY OF ALAMEDA )

On December 2, 2000, before the undersigned, a Notary Public for the State and County aforesaid, personally appeared WILLIAM J. KOHR known to me to be the person whose name is subscribed to the above Assignment, and acknowledged that he executed the same.



  
Anacorina Lola  
Notary Public in and for  
Said County and State

Express Mail No.  
EL 740478036 US

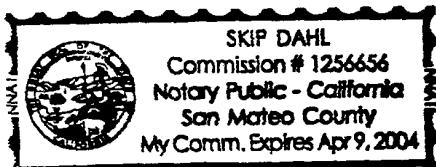
Patent  
256/248

WITNESS my hand at San Mateo, California, this 5<sup>th</sup> day of December  
2000.

Vandy Shrader  
VANDY SHRADER

STATE OF CALIFORNIA )  
San Mateo )  
COUNTY OF ALAMEDA ) ss.

On December 5, 2000, before the undersigned, a Notary Public for the State and County aforesaid, personally appeared VANDY SHRADER known to me to be the person whose name is subscribed to the above Assignment, and acknowledged that he executed the same.



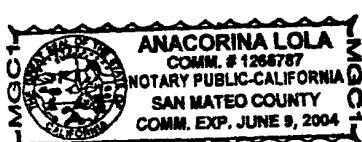
Skip Dahl  
Notary Public in and for  
Said County and State

WITNESS my hand at So. San Francisco, California, this 2 day of Dec,  
2000.

Chris Johansson  
CHRIS JOHANSSON  
aka Christopher

STATE OF CALIFORNIA )  
San Mateo )  
COUNTY OF ALAMEDA ) ss.

On December 2, 2000, before the undersigned, a Notary Public for the State and County aforesaid, personally appeared CHRIS JOHANSSON known to me to be the person whose name is subscribed to the above Assignment, and acknowledged that he executed the same.



Anacorina Lola  
Notary Public in and for  
Said County and State